



FIRE ALARM AND SPRINKLER MONITORING SYSTEM **REQUIREMENTS**

This information package shall be used in conjunction with NFPA 72, California Electrical Code and other applicable NFPA standards as adopted by the City of Mountain View. (Refer to Mountain View City Code Chapter 8 for adopted editions of NFPA). This information package is not intended for use as a stand-alone document.

ADMINISTRATIVE:

- Submit a completed permit application and a minimum of three sets of drawings and specifications to the Mountain View Building Inspection Division, 500 Castro Street. Submittals shall be made in person. Submittals received via mail will be returned to sender.
- Plan check turnaround time for initial submittals is a **minimum** of 10 working days with rechecks a **minimum** of 5 working days.
- All plan information shall be **bluelined** onto the drawings.
- Incorporate onto the drawings: the design and installation contractor's name, address, phone number, California contractor's license number and license type or P.E. license number.
- The contractor will be notified by phone when the plans and permit are ready for pickup. All plan check and permit fees will be collected when the plans are approved. **Plans and plan check corrections must be picked up in person. Plan check corrections will not be returned to the contractor by mail or fax.**
- Field inspections are conducted Monday, Wednesday and Friday only. For inspection scheduling or for general information please call (650) 903-6313. Inspections will not be scheduled until a permit has been issued. **Allow 2-3 working days' advanced notice when requesting inspections.** The permit card and an **approved set** of plans must be kept at the project site until the permit is finalized. Failure to maintain the permit card and approved plans on site will result in the cancellation of the inspection.

FIRE ALARM EQUIPMENT:

1. System components shall be California State Fire Marshal listed. Include California State Fire Marshal listing sheets for all new components and existing components as available.
2. Equipment shall be listed for the purpose for which it is used. Submit complete manufacturer's specification sheets (i.e. Catalog cut sheet) for each system component. On cut sheets that include more than a single device, clearly indicate the specific item(s) to be installed by use of an arrow or similarly effective marking.

NOTE: The City Of Mountain View reserves the right to not approve a listed component or piece of equipment due to past performance.

DRAWINGS & CALCULATIONS:

(Drawings and Calculations requirements 6, 13, 14, 15, and Inspection/ Testing requirement #4 are not mandatory for fire sprinkler monitoring systems).

1. The system shall be designed and installed in accordance with the City of Mountain View requirements, NFPA 72 and other applicable NFPA Standards as adopted by the City of Mountain View. *Incorporate this as a verbatim note onto the drawings.*
2. Identify the occupancy classification or specific use of the building.
3. Provide a detailed description of the work to be performed and indicate the reason for the fire alarm system installation. (ie. Required by code, voluntary system installed at owner's request).
4. Specify the type of monitoring system being provided (i.e. Local, Central Station, Proprietary, Remote) and include the name, address and evidence of UL certification for the monitoring company.
5. The minimum scale for fire alarm plans is $3/32" = 1'-0"$.
6. Identify the use of each room or area.
7. Provide roof/ceiling construction details for areas with heat/smoke detection. Information shall include, but shall not be limited to, a complete evaluation identifying all factors used in determining proper detector coverage/spacing. The evaluation shall include: adjustments made for ceiling height(s), beam depth and spacing and high air-movement areas.

8. Provide a system operations matrix and include a complete sequence of events indicating all alarm, supervisory and trouble conditions.
9. Specify the wire types, sizes and number of conductors between all devices.
10. Show the location of all end-of-line resistors.
11. Identify all devices tied into the fire alarm system and provide details describing all special features or operations. (ie. air-moving systems shutdown, smoke detectors for door release, pre-action valves, elevator recall, duct detectors for fire/smoke dampers, sprinkler system monitoring, monitoring of kitchen hood extinguishing systems, and voice evacuation systems).
12. Smoke detectors for the control of smoke spread (ie. fire/smoke dampers in ducted and nonducted openings, door hold devices and shutdown of air-moving systems in excess of 2000cfm) shall be monitored for alarm, supervisory and trouble conditions by the fire alarm system.
13. Duct smoke detectors for fire/smoke damper control shall be located within five (5) feet on the upstream side of the damper. Branches, registers or any other openings are NOT permitted to be located between the duct detector and the damper.
14. Smoke detectors for nonducted fire/smoke damper openings shall be installed in accordance with NFPA 72, Sect. 2-10.4.2 and Figure A-2-10.4.2.2 (a).
15. Identify the mounting heights for all devices: (ie. pull stations, horn/strobes, fire alarm control panels (FACP) and wall-mounted smoke detectors).
16. The primary power source for the FACP shall be from a dedicated circuit. This circuit shall be labeled at both the electrical subpanel and on the inside of the FACP door and provided with a circuit lock. *Incorporate this as a verbatim note onto the drawings.*
17. Provide a symbols legend identifying the specific manufacturer and model, the California State Fire Marshal listing number and the count for each device.
18. Identify wire runs between devices on the same floor and between floors.
19. Alarm zones shall be clearly identified on the drawings and labeled at the fire alarm panel.

20. A readily visible sign shall identify the location of the fire alarm control panel.
Incorporate as a verbatim note onto the drawings.
21. Alarm-signaling devices shall produce a distinctive three-pulse temporal pattern fire alarm evacuation signal. Audible signals shall have a sound level of not less than 75dBA at 10' or at least 15 dBA above the average ambient sound level as measured 5' above the floor in the occupied area, whichever is greater, but no more than 120 dBA at the minimum hearing distance from the audible appliance. *Incorporate this as a verbatim note onto the drawings.*

Exception: Sprinkler monitoring systems shall be provided with an interior waterflow alarm on each floor to be located in a normally occupied location. (See Condition #27)

22. Waterflow alarm devices, sprinkler supervisory devices and readily accessible junction boxes shall be designed and installed so they cannot be readily tampered with, opened, or removed without initiating a signal. (Ie. Electric tamper switch on the cover or provided with tamper resistant screws).
23. Provide a voltage drop calculation for each circuit. The allowable voltage drop shall not exceed the manufacturer's minimum operating voltage for the device.
24. Provide battery calculations which include the required standby and alarm power requirements for the system. Indicate the size and number of batteries required and provided.

ADDITIONAL REQUIREMENTS FOR SPRINKLER MONITORING SYSTEMS:

25. An automatic smoke detector shall be provided at the location of each fire alarm control unit(s). Sect. 1-5.6 Installation of detectors shall comply with Sect. 2-3.4.3.1.
26. An approved interior audible waterflow alarm shall be provided in a normally occupied location. In buildings more than one story in height an approved audible alarm shall be installed for each story.
27. A single manual fire alarm box, to initiate a fire alarm signal, shall be located adjacent to the fire alarm control unit.

28. A sign or placard stating "Waterflow Alarm" shall be mounted adjacent to the interior waterflow alarm. The minimum dimension for lettering shall not be less than the represented sample. *Incorporate this as a verbatim note onto the drawings.*

Sample: **Waterflow Alarm** (36 Font)

INSPECTION/TESTING:

1. Provide an NFPA 72 Certificate of Completion at the time of final inspection.
2. It shall be the responsibility of the fire alarm contractor to make the necessary arrangements so those contractors whose equipment is involved in the testing are present. (I.e., mechanical contractor, electrical contractor, fire sprinkler contractor).
3. There shall be a minimum of two representatives from the fire alarm company present at the time of inspection. One representative shall be present at the fire alarm control panel at all times during the test with the second representative performing the required testing in the presence of the inspector. Representatives shall be equipped with two-way radios during testing.